



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,590	10/18/2000	MINORU KATAYAMA	107612	2593
25944	7590	11/21/2003	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			CYGAN, MICHAEL T	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/690,590	KATAYAMA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Cygan	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-8 and 10-12 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 10-12 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
     a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☒ Interview Summary (PTO-413) Paper No(s). 413a2.
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                      6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 2, and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda (JP 08-029153) in view of WO 90/12277 (Bielle). Fukuda discloses a surface contour measurement device (Figure 1) for measuring a workpiece having an edge line (Figure 6) having a rotatable stage which is movable in the X- and Y-axis directions and has an inclination correction means (titubation device [42] rocking the object on titubation shaft (fulcrum)); see Figure 1 and English language translation pages 2-5, especially paragraphs 9 and

25. Fukuda discloses a measurement means [10A] being controlled by a measurement controller [50] which comprises measurement of a surface from a start point to an end point (which inherently have max/min Z-axis endpoints in the inclination measurement) to calculate an initial orientation, and input of X-axis, Y-axis, and swivel angle values to an error correction means, and further discloses adjusting the rotation, inclination, and Y-axis movement of the piece to correct the piece to a desired alignment based upon a result from an error calculation means; see especially Figure 2 and page 4 of English language translation and paragraphs 23, 33, and 39 of the original document. Fukuda discloses the method of automatic measurement of a surface from a start point to an end point (which inherently have max/min Z-axis endpoints in the inclination measurement) to calculate an initial orientation, and input of X-axis, Y-axis, and swivel angle values to an error correction means, and further discloses adjusting the rotation, inclination, and Y-axis movement of the piece to correct the piece to a desired alignment based upon a result from an error calculation means; see especially page 4 of English language translation and paragraphs 23, 33, and 39 of the original document. It is noted that Fukuda has predetermined X-axis start and end coordinates (as in Figure 3) which are programmed into the automatic controller which operates the X-axis slider which are subsequently subject to actual measurement. Fukuda teaches obtaining three

(actual) measurements of the workpiece and using those measurements to find a center line (locus) which determines the amount of adjustment required to be performed to the workpiece to position the workpiece to the desired alignment; see paragraphs 23 and 24 of the English language abstract and Figure 4.

With respect to claims 4-7, Fukuda teaches the claimed invention except for the use of a fulcrum-based, manually operated leveling device having a micrometer knob and a display of the orientation correction amount. Bielle teaches the use of a fulcrum-based, manually operated leveling device having a micrometer knob and a display of the inclination orientation correction amount in a surface roughness measurement device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a fulcrum-based, manually operated leveling device having a micrometer knob as taught by Bielle in the invention of Fukuda to orient the piece relative to the displacement detecting means, since this would advantageously provide a structure shown to be capable of positioning of the preferred measurement surface of the piece relative to the detecting means.

With respect to claims 1 and 2, neither Bielle nor Fukuda disclose manual displacement in the Y-axis direction in accordance with a displayed swivel correction angle. Fukuda discloses only the automatic operation of Y-axis and swivel correction due to error values (page 4, paragraph 25 of English abstract), and states that this method is superior

to the prior known "hand regulation by the operating personnel". Fukuda thus "teaches away" from manual operation, but discloses that such operation is known in the prior art. As stated in *In re Gurley*, "the nature of the teaching is highly relevant and must be weighed in substance. A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use", *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed Cir. 1994). See also MPEP 2145(X)(D)(1). In the present case, Fukuda discloses manual operation as known, but somewhat inferior for the same use as automatic operation. The use of manual operation of inclination angle in Bielle further supports the usefulness and obviousness of manual operation of system parameters. Therefore, it would have been obvious to one having ordinary skill in the art to use manual operation of Y-axis correction, which is disclosed to be known in the prior art by Fukuda, in the invention of Fukuda in view of Bielle to correct the orientation of a workpiece, since this would advantageously allow correction of positioning of the preferred measurement surface of the piece relative to the detecting means in the Y-axis direction. The use in the invention of Fukuda of micrometer knobs as taught by Bielle for manual operation would have been obvious to one having ordinary skill in the art at the time the invention was made, since micrometer knobs are well known for use in manual position adjustment and perform that function in Bielle for the purpose desired by Fukuda.

***Allowable Subject Matter***

2. Claims 8 and 10-12 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter: The claims are directed to unobvious improvement over the prior art, comprising a series of at least three measurement data based on a single-scanned displacement signal from the displacement detecting means to calculate an operation amount at the point of action relative to the fulcrum required for paralleling the center locus with the base line of the moving means, in combination with the other positively recited elements of the claims.

***Response to Arguments***

4. Applicant's arguments filed 27 October 2003 have been fully considered but they are not persuasive. Applicant argues a distinction involving the positioning of measurement start and end set points corresponding to points obtained from a previous measurement. However, the claim merely recites "ordinary" measurement in which the "positions of the workpiece" are determined by a calculated edge line. The claim being given its broadest reasonable interpretation is made obvious over Fukuda as set forth in the rejection since Fukuda teaches determining workpiece positions followed by further

measurement as set forth in the detailed procedure for normal operation of the orientation, which would be considered "ordinary" in the sense that it is the expected, usual occurrence.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
  
6. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is



703-305-0846. The examiner can normally be reached on 8:30-6 M-Th, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 703-305-4816. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read 'Michael Cygan', with a stylized flourish at the end.

Michael Cygan  
Examiner  
Art Unit 2855